

Saving Lives and Saving Money An Urgent Call to Build the National Spatial Data Infrastructure in Support of Public Safety

A Declaration of Interdependence

On a daily basis **state and local governments** are engaged in activities that save lives, protect property and guarantee the safety of more than 284 million Americans. But they do so without the benefit of key data, tools and standards that can ensure improved safety for first responders and citizens alike. Spatial data (information linked to an electronic map) and associated technologies significantly increase emergency response effectiveness and efficiency. They also enhance hazard mitigation, and provide for non-emergency applications that will pay for themselves many times over. At all levels of government, for a multitude of reasons, this country must have a comprehensive National Spatial Data Infrastructure to support Public Safety and many other purposes.

National development of timely, accurate and consistent spatial data will significantly enhance government lifesaving operations and countless other government services. While a large number of local governments already use spatial technologies, many cannot reap the full benefits, because there are gaps and inconsistencies in available data, or they rely on partners that cannot afford the technology. Spatial data must be created through national initiatives to ensure that they are available to all who require their use for lifesaving and public safety applications.

Every day, police officers are dispatched countless times to stop crimes in progress and to assist citizens in need of help. Spatial data applications such as "Comstat" in New York City allow police managers to analyze crime patterns and the tactics of their departments. These tools are effective in reducing violent crime and have contributed to a 68% reduction in New York City's annual murder rate from more than 2,000 ten years ago, to less than 650 today. Firefighters and Emergency Medical Service personnel work around the clock to put out fires and to respond to the health emergencies of individual citizens. State and local Departments of Health are engaged in daily operations to identify, track and mitigate life-threatening diseases. Departments of Transportation respond to accidents, keep roads safe, and analyze accident patterns to develop strategies that reduce injury and death.

All of these operations have two things in common. They are responsible for saving lives each and every day, and they rely upon information resources that have a spatial or geographic context that is critical to their success.

The most critical National Spatial Data Infrastructure elements for Public Safety are:

- Digital orthoimagery (map-accurate aerial photography) at resolutions that are appropriate for every location to clearly show significant features.
- Accurate and consistent street and highway centerlines with street names and addresses affixed to them.
- Parcel boundaries, and for urban areas, building footprints with unique identifiers and basic characteristics.
- Significant natural features, including topography and vulnerable areas.
- Critical infrastructure elements such as aquifers, water distribution systems, wastewater treatment plants, bridges, tunnels, gas mains, power plants, geodetic control, telecommunication hubs, electric transmission lines, and places of public assembly.
- Locations of hazardous materials storage and other dangerous conditions or facilities.

When combined with such existing technologies as Geographic Information Systems, computer-aided dispatch systems, routing software, the Global Positioning System, Automated Vehicle Location, remote sensing and others, these data create the foundation for a modern public safety information infrastructure. During major emergencies such as terrorist attack, flood, fire, earthquake or hurricane, they can immediately be used to support the efforts of first responders. They also support hazard mitigation operations such as the tracking of potential terrorists and environmental monitoring to prevent emergencies from happening in the first place.

Lifesaving operations extend beyond the borders of local jurisdictions and also beyond state and regional boundaries. Therefore, it is essential that spatial data be built to comprehensive, consistent and nationally agreed upon standards. Because of the detailed and local nature of the data, and because they will be used every single day by local public safety personnel, they need to be built and maintained in cooperation with state and local jurisdictions.

Emergencies strike urban centers and remote locations alike, without regard for the local residents who are injured or killed, and suffer financial losses. The first responders in these communities put their lives on the line while serving others. By the time significant state and Federal relief arrives, most of the fatalities and serious injuries have already been sustained at the local level. It is therefore essential that local public safety personnel have routine access to these public safety data and be thoroughly familiar with their uses. National Homeland Security and emergency management operations must use these same data so that Federal support and response efforts can be quickly and easily integrated with efforts at local and State levels.

Creation and deployment of the Public Safety components of the National Spatial Data Infrastructure will have many additional benefits. Local and state governments can use the same data to provide a foundation for

countless non-emergency operations and applications, including e-government initiatives, economic development, waste removal, street cleaning, code enforcement, environmental protection, growth planning, construction permitting, inspections, capital construction and human services. These applications of spatial data are known to increase workforce productivity, streamline business processes, save money and improve services delivered to the public. Nationally, the aggregations of standards-based spatial data can lead to the creation of a National Map that gives America's citizens vital information for their businesses and day-to-day lives. The investment criteria for spatial data are routinely satisfied for non-emergency applications. Given the more urgent need to be better prepared for protecting our citizens in the post 9/11 world, the benefit of investments in spatial data created for public safety will extend to non-emergency applications and will pay for themselves many times over.

To take advantage of this life-saving and money-saving technology, which is currently available and should already be in the hands of every government agency across the nation, we must complete the job of comprehensively building a public safety oriented and spatially enabled data network. The creation of the Public Safety components of the National Spatial Data Infrastructure is essential now, before it is required to respond to a catastrophe, and before someone asks why it wasn't available when it was truly needed.

For these reasons the following undersigned organizations ask the Congress of the United States to create and enact omnibus legislation that will direct a coordinated national effort to fund production, maintenance and appropriate access of these data at State and local levels.

Alan Leidner, Director
New York City GIS Utility

Rick Miller, President
National States Geographic Information Council

Other Suggested Organizations:

National Governor's Association

National Association of Counties

National Conference of State Legislators

U.S. Conference of Mayors

Council of State Governments

National League of Cities

National Association of State Chief Information Officers

Council for Excellence in Government

International City and County Managers Association

Geospatial Leadership Coalition

Spatial Technologies Industry Association

Management Association for Professional Photogrammetric Surveyors

Aerospace States Association

Western States Governor's Association

Southern States Governor's Association

Public Technologies, Inc.

Other National Organizations

All Individual State GIS Councils

National Fire, Police and Emergency Management Agency Organizations